

Application No. 10/584,101
Amendment dated
Reply to Final Office Action of September 15, 2009

Docket No.: 15417-000011/US/NP

LISTING OF THE CLAIMS

The following listing of claims does not include any amendments and is provided for the convenience of the Office.

LISTING OF CLAIMS

1. – 13. (Canceled)

14. (Previously Presented) An automatic belt tensioner comprising:

a basic part that is adapted be coupled to an engine, the basic part having a pivot axis;

a tensioning part that is coupled to the basic part and pivotable about the pivot axis;

a helical torsion spring extending along the pivot axis, the helical torsion spring biasing the tensioning part about the pivot axis in a predetermined direction;

a spring sleeve comprising a first portion, which is parallel to the pivot axis, and a second portion that is perpendicular to the pivot axis, the first portion being disposed between the tensioning part and the helical torsion spring, a first side of the second portion abutting an axial end of the helical torsion spring, a second side of the second portion that is opposite the first side being in abutment with the basic part; and

a wrapping bush formed of reinforced plastic and being disposed between the first portion of the spring sleeve and the helical torsion spring;

the helical torsion spring applying a radial enveloping force to the wrapping bush that is communicated to the first portion of the spring sleeve to cause the first portion of the spring sleeve to grippingly engage the tensioning part.

15. (Previously Presented) The automatic belt tensioner of claim 14, wherein the reinforced plastic comprises reinforcing fibers.

16. (Previously Presented) The automatic belt tensioner of claim 14, wherein the reinforcing fibers are formed of glass.

17. (Previously Presented) The automatic belt tensioner of claim 14, wherein the reinforced plastic comprises reinforcing spheres.

18. (Previously Presented) The automatic belt tensioner of claim 17, wherein the reinforcing spheres are formed of glass.

19. (Previously Presented) The automatic belt tensioner of claim 14, wherein the wrapping bush can accommodate both left-handed and right-handed helical springs.

20. (Previously Presented) The automatic belt tensioner of claim 19, wherein a peripheral edge of the wrapping bush comprises inclines that correspond in one area to the course of a left-handed helical spring and in another area to the course of a right-handed helical spring.

21. (Previously Presented) The automatic belt tensioner of claim 14, wherein the wrapping bush is enveloped by less than one full turn of the helical torsion spring.

22. (Previously Presented) The automatic belt tensioner of claim 21, wherein the wrapping bush is enveloped by at least one half turn of the helical torsion spring but not more than 0.7 turn of the helical torsion spring.

23. (Previously Presented) The automatic belt tensioner of claim 14, wherein the wrapping bush on a free end thereof comprises a chamfered peripheral edge.

24. (Previously Presented) The automatic belt tensioner of claim 14, wherein a peripheral edge of the wrapping bush opposite a free end comprises at least one engaging feature that engages with a mating engaging feature provided in the spring sleeve so as to resist rotation.

25. (Previously Presented) The automatic belt tensioner of claim 14, wherein an inside surface of the spring sleeve comprises at least one depression for receiving lubricant.

26. (Previously Presented) The automatic belt tensioner of claim 25, wherein the depression extends in an axial direction that is parallel to the pivot axis.

27. (Previously Presented) The automatic belt tensioner of claim 26, wherein the depression has a notched design in the cross-sectional view.

28. (Previously Presented) The automatic belt tensioner of claim 14, wherein the second portion of the spring sleeve comprises a plurality of discrete portions that are circumferentially spaced apart from one another.

29. (Previously Presented) The automatic belt tensioner of claim 14, wherein the second portion of the spring sleeve comprises a projecting spring end support.